

Notice of Allowability

Application No.

10/718,083

Examiner

Camie S. Thompson

Applicant(s)

KIM ET AL.

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed March 8, 2005.
2. ☒ The allowed claim(s) is/are 1-26.
3. ☒ The drawings filed on 08 April 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 5/25/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. Claims 1-16 are directed to an allowable product. Pursuant to the procedures set forth in the Official Gazette notice dated March 26, 1996 (1184 O.G. 86), claims 17-26, directed to the process of making or using the patentable product, previously withdrawn from consideration as a result of a restriction requirement, are now subject to being rejoined. Claims 17-26 are hereby rejoined and fully examined for patentability under 37 CFR 1.104.

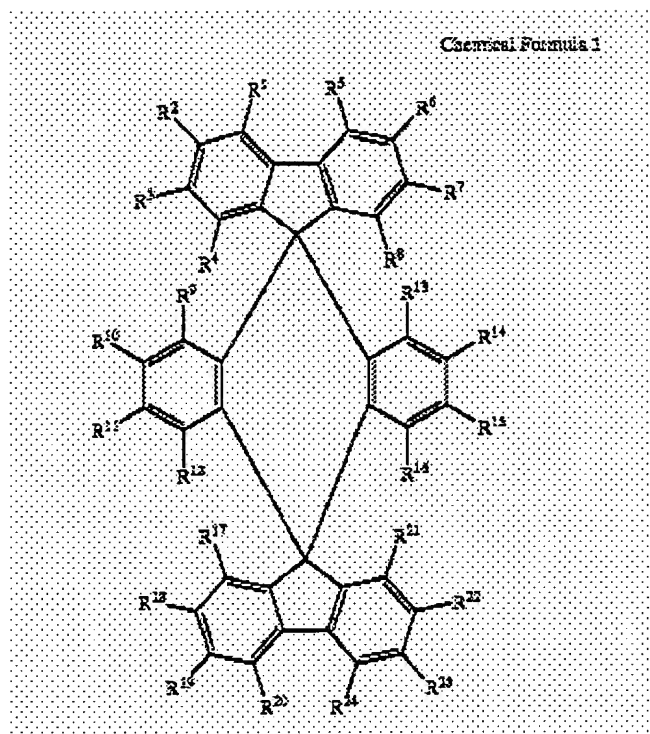
Since all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, the restriction requirement made in the Office action mailed on April 8, 2004 is hereby withdrawn.

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: The prior art does not provide for an organic electroluminescent ("EL") device comprising:

an anode; a cathode; and at least one layer located between the anode and the cathode, wherein at the at least one layer comprises a light-emitting layer having a double-spiro compound of the Chemical Formula I:

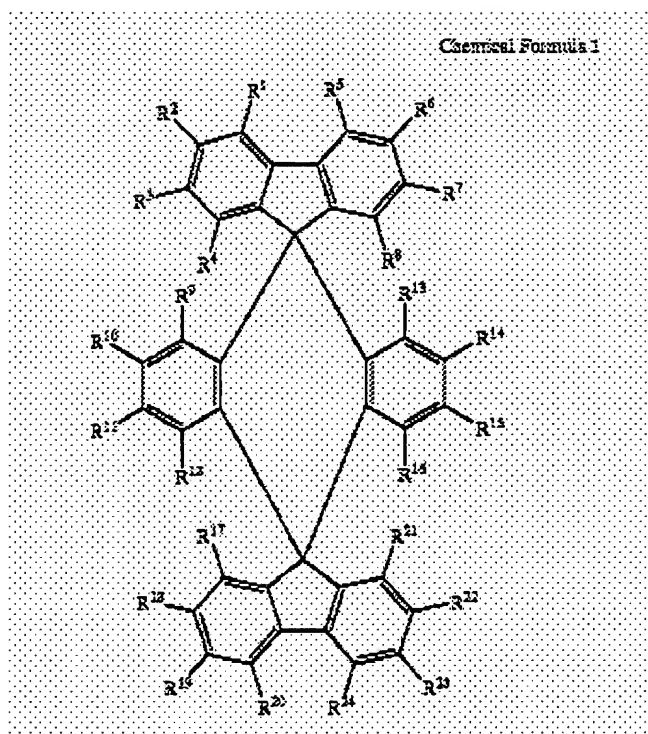
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wherein R1 through R24 are substituent groups, identical or different, and wherein not all of R1 through R24 are hydrogen.

Additionally, the prior art does not provide for a method of generating visible light from an organic electroluminescent ("EL") device comprising:

an anode; a cathode; and at least one layer located between the anode and the cathode, wherein at the at least one layer comprises a light-emitting layer having a double-spiro compound of the Chemical Formula I:

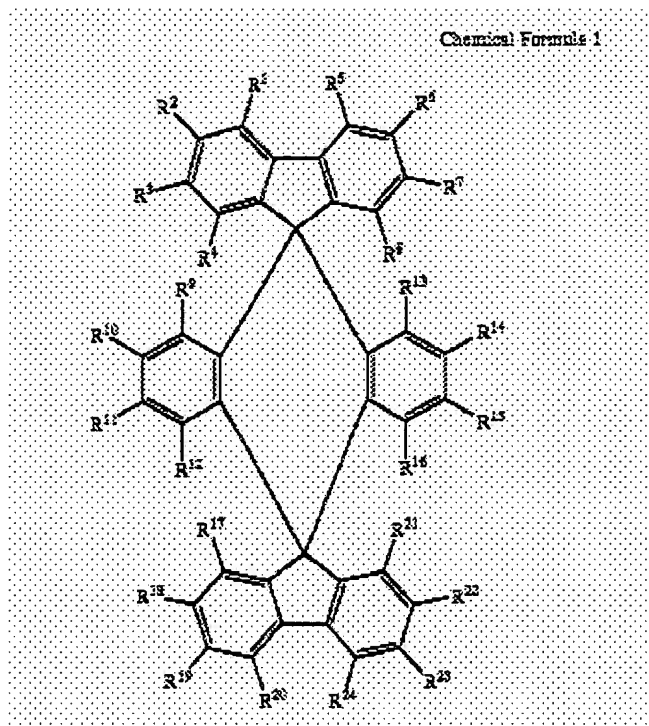


wherein R1 through R24 are substituent groups, identical or different, and wherein not all of R1 through R24 are hydrogen, comprising:

applying electric power between the anode and cathode of the organic EL device; the cathode injecting electrons toward the light-emitting layer; the anode injecting holes toward the light-emitting layer; and allowing recombination of at least part of the injected electrons and holes in the light emitting layer, thereby generating visible light from the light-emitting layer. The prior art does not provide for a method of manufacturing the organic electroluminescent (“EL”) device comprising:

an anode; a cathode; and at least one layer located between the anode and the cathode, wherein at the at least one layer comprises a light-emitting layer having a double-spiro compound of the Chemical Formula I:

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wherein R1 through R24 are substituent groups, identical or different, and wherein not all of R1 through R24 are hydrogen, the method comprising:

forming a first conductive layer;

depositing a material comprising the double-spiro compound of the Chemical Formula I on a first conductive layer so as to form at least one layer comprising the light-emitting layer, and

forming a second conductive layer on the material, wherein either of the first and second conductive layers corresponds to the anode or cathode.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

No further response is required from applicant with respect to the final rejection mailed May 31, 2005.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Camie S. Thompson whose telephone number is 571-272-1530. The examiner can normally be reached on Monday-Friday 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L. Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RENA DYE
SUPERVISORY PATENT EXAMINER
A.U. - 1774 6/24/05